

Chapter 4, Ecosystems and Communities *(continued)*

Section 4–3 Biomes (pages 98–105)

*This section describes the unique characteristics of the world's major biomes.
It also describes other land areas.*

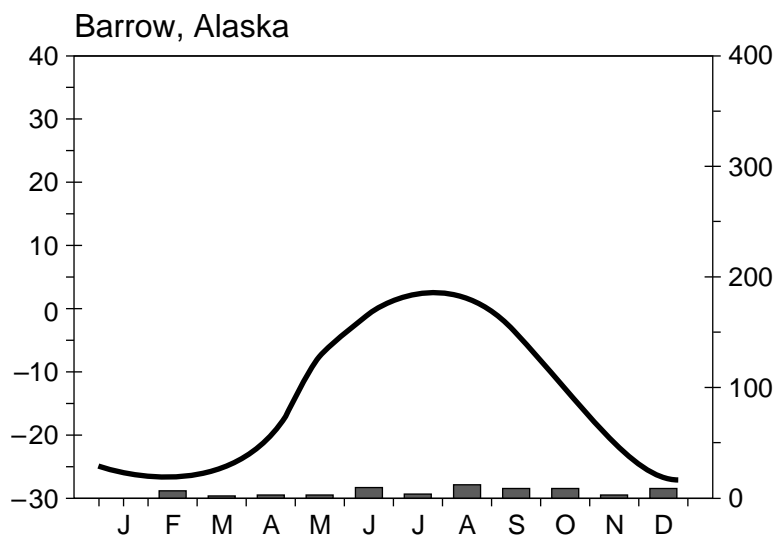
Introduction (page 98)

1. What is a biome? _____

Biomes and Climate (page 98)

2. What does a climate diagram summarize? _____

3. Complete the climate diagram by adding labels to the bottom and both sides of the graph to show what the responding variables are.



4. On a climate diagram, what does the line plot, and what do the vertical bars show?

5. What is a microclimate? _____

The Major Biomes (pages 99–103)

6. Circle the letter of each sentence that is true about how each of the world's major biomes is defined.
- Each is defined by a unique set of abiotic factors.
 - Each has a characteristic ecological community.
 - Each is defined by the country it is in.
 - Each is particularly defined by climate.

Use the map in Figure 4–11 on page 99 of your textbook to match the biome with its geographic distribution.

Biome	Geographic Distribution
_____ 7. Tropical rain forest	a. Forest biome that occurs almost exclusively in the Northern Hemisphere
_____ 8. Tundra	b. Biome that occurs on or near the equator
_____ 9. Boreal forest	c. Biome that occurs near or above 60°N latitude

10. Complete the table about layers of a tropical rain forest.

LAYERS OF A TROPICAL RAIN FOREST

Layer	Definition
_____	Dense covering formed by the leafy tops of tall trees
_____	Layer of shorter trees and vines

11. In what kind of place do tropical dry forests grow? _____

12. What is a deciduous tree? _____

13. What is another name for tropical savannas? _____
14. Is the following sentence true or false? Savannas are found in large parts of eastern Africa. _____
15. Circle the letter of each sentence that is true about deserts.
- They are hot, day and night.
 - The soils are rich in minerals but poor in organic material.
 - Cactuses and other succulents are dominant plants.
 - Reptiles are the only wildlife.
16. What amount of annual precipitation defines a desert biome? _____

Chapter 4, Ecosystems and Communities *(continued)*

17. What factors maintain the characteristic plant community of temperate grasslands?

18. Why is fire a constant threat in temperate woodland and shrubland? _____

19. Communities that are dominated by shrubs are also known as _____.

20. What kinds of trees do temperate forests contain? _____

21. What is a coniferous tree? _____

22. What is humus? _____

23. What is the geographic distribution of the northwestern coniferous forest?

24. Boreal forests are also called _____.

25. What are the seasons like in a boreal forest? _____

26. Circle the letter of each sentence that is true about boreal forests.

- a. Dominant plants include spruce and fir.
- b. They have very high precipitation.
- c. They have soils that are rich in humus.
- d. Dominant wildlife include moose and other large herbivores.

27. What is permafrost? _____

28. What happens to the ground in tundra during the summer? _____

29. Why are tundra plants small and stunted? _____

Other Land Areas (page 105)

30. When are the polar regions cold? _____

31. What plants and algae can be found in the polar ice regions? _____

32. In the north polar region, what are the dominant animals? _____

33. The abiotic and biotic conditions of mountain ranges vary with _____.
34. Number the sequence of conditions you would find as you moved from the base to the summit of a mountain. Number the conditions at the base 1.
- _____ a. Stunted vegetation like that in tundra
 - _____ b. Grassland
 - _____ c. Forest of spruce and other conifers
 - _____ d. Open woodland of pines

Reading Skill Practice

You can often increase your understanding of what you've read by making comparisons. A compare-and-contrast table helps you to do this. On a separate sheet of paper, make a table to compare the major land biomes you read about in Section 4-3. The characteristics that you might use to form the basis of your comparison could include a general description, abiotic factors, dominant plants, dominant wildlife, and geographic distribution. For more information about compare-and-contrast tables, see Organizing Information in Appendix A of your textbook.